

AMENDMENTS TO THE DRAWINGS:

Replacement drawings are submitted for Figures 1 and 2 labeling these figures as prior art.

REMARKS

The application has been amended to place it in condition for allowance at the time of the next Official Action.

Oath/Declaration

The oath/declaration submitted on September 1, 2006 is believed to be fully compliant with 37 CFR 1.67(a), because while the country of citizenship is France, nevertheless, the correct citizenship is French.

Drawings

Replacement drawings are submitted for Figures 1 and 2 labeling these as prior art. The above change is the only change and is believed not to constitute new matter.

As to the objection to Figure 7, numerals 1-16 number the 16 filter blocks. Since these numbers are not underlined, a person viewing Figure 7 would understand that these numbers are an integer that consecutively numbers the blocks from 1 to 16 and are not reference numerals. Accordingly, Figure 7 is believed to comply with 37 CFR 1.84(p)(4) and withdrawal of the rejection is respectfully requested.

Specification

The abstract filed with the preliminary amendment of June 22, 2006 (page 10) is believed to be a proper abstract. As stated in the preliminary amendment of that date, that abstract replaces the abstract filed with the application (containing the phrase "figure for the abstract: figure 4"). The abstract attached to the WO document was merely a submission of the international application and not intended to be submission of an abstract.

In view of the above, withdrawal of the specification objection is respectfully requested.

Section headings are added to the specification. The addition of these headings is believed not to constitute new matter.

IDS

The IDS filed June 22, 2006 is believed to be fully compliant with 37 CFR 1.98(a)(2) because the present application is a national stage of an international application and the USPTO is supposed to obtain copies of the references from the International Bureau. Nevertheless, in order to advance prosecution, copies of the cited references are submitted herewith for the Examiner's convenience. Consideration of the references is respectfully requested.

Claims

Claims 18-34 were previously pending in the application. Claim 28 has been canceled and new claims 35-37 are added. Therefore, claims 18-27 and 29-37 are presented for consideration.

Claims 18-34 were rejected under 35 USC 103(a) as being unpatentable over HIGUCHI et al. US 4,364,760 in view of KOTANI et al. US 5,629,067. That rejection is respectfully traversed.

Claim 18 recites a filter body comprising an assembly of blocks. As explained at page 2, lines 19 to 35, a critical problem that the present invention addresses is the occurrence of cracks at the interfaces between the blocks and the seals.

KOTANI and HIGUCHI both disclose monolithic bodies, wherein such a problem cannot occur since there is no such interface. That is, the references fail to disclose an assembly of blocks.

Moreover, in a filtering application, the highest thermomechanical stresses appear during the regeneration phases when soot is oxidized. As explained in detail at page 2, lines 19 to 35 of the present application, the combustion zones are not uniformly distributed in the filter body, which results in a nonuniformity of the temperatures and generates high amplitude focal stresses.

In an assembled filter body, elastic sealing material may be inserted between the blocks to absorb mechanical stresses.

On the contrary, by definition, in a monolithic body as in the references, there are no blocks, and consequently no possibility of providing additional elasticity within the body. This leads to mechanical stresses at the periphery of the body which are much higher than with an assembled body.

Accordingly, one of ordinary skill in the art would understand that the magnitude of the thermomechanical stresses in a monolithic body is therefore not of the same order as that of an assembled filter body, as recited in claim 18.

In view of this, one of ordinary skill in the art would understand that when resistance to thermomechanical stresses is concerned, documents dealing with monolithic filter bodies should not be considered as relevant, or combined with documents dealing with assembled filter bodies.

Returning to the references, it is seen that KOTANI deals with the unsatisfactory isostatic strength of the outer periphery of a monolithic honeycomb structure when it is submitted to canning (column 2, lines 5-38, and in particular lines 29 to 38). KOTANI teaches that a plurality of grooves should be formed on the outer periphery of the filter body and filled with an outer coating.

Thus, even if one of ordinary skill in the art had contemplated using KOTANI with an assembled filter body, he would have formed grooves on the outer periphery of the assembled

filter body, but certainly would not contemplate forming grooves on the outer periphery of assembled blocks.

On the contrary, KOTANI explains that there is a need for a reduced thickness for the honeycomb walls (column 1, lines 34-38; column 2, lines 11-13). Reinforcing the outer periphery of assembled blocks would be contrary to this teaching.

In addition, filling grooves on the periphery of assembled blocks with a coating would have led to a reduction in the number of available channels, and consequently, to a decrease of the efficiency of the filter body.

Therefore, one of ordinary skill in the art would understand that he could not apply the teaching of KOTANI for assembled blocks as KOTANI teaches away from such a configuration.

Moreover, the offered motivation for combining the references is not relevant to an assembly of blocks, because the problem of distortion or deformation of peripheral cells described in KOTANI (see figure 2) does not occur with the blocks of an assembled filter body since these blocks are much smaller.

In view of the above, not only does the proposed combination of references fail to disclose each of the recited features, but also the references could not combined with each other or another reference to meet the present claims.

New claims 35-37 are added. Support for the new claims can be found in the Figures and on page 1, line 18, page 3, lines 11-12 and page 4, lines 18-22.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Liam McDowell/
Liam McDowell, Reg. No. 44,231
209 Madison Street, Suite 500
Alexandria, Virginia 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

LM/fb

APPENDIX:

The Appendix includes the following item(s):

- ☒ - replacement drawings for Figures 1 and 2
- ☒ - copies of the foreign references cited in the IDS of June 22, 2006